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EXAMINER
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GRAVINI, STEPHEN MICHAEL

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3743

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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Application Number: 10/562,105  
Filing Date: December 22, 2005  
Appellant(s): JERG ET AL.

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Andre Pallapies  
For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed October 7, 2010 appealing from the Office action mailed June 10, 2010.

**(1) Real Party in Interest**

The examiner has no comment on the statement, or lack of statement, identifying by name the real party in interest in the brief.

**(2) Related Appeals and Interferences**

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

**(3) Status of Claims**

The following is a list of claims that are rejected and pending in the application:

9. (Rejected) A method for operating a home appliance device, comprising: subjecting items retained in the home appliance to a drying step after the items have undergone a treatment step as a result of which moisture remains on the items, the step of drying including drawing at least one of air from a treatment chamber and ambient air through a sorption column and thereafter guiding the air that has passed through the sorption column into a treatment chamber, the sorption column containing reversibly dehydratable material that operates to withdraw moisture from air during the passage of the air through the sorption column; and effecting desorption of the reversibly dehydratable material in the sorption column via drawing at least one of air from the treatment chamber and ambient air through the sorption column by means of an air accelerator means, subjecting air passing through the sorption column to heating, and guiding the air that has been heated as it passed

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through the sorption column into the treatment chamber, wherein the air which is guided into the treatment chamber heats at least one of a treatment liquid to be applied to the items retained in the home appliance and the items themselves.

10. (Rejected) The method according to claim 9, wherein effecting desorption of the reversibly dehydratable material includes heating air during its passage through the sorption column by heat of condensation and a selected one of additional heating via a heater and no additional heating via a heater.

11. (Rejected) The method according to claim 9, wherein the passage of air is undertaken during a programme step using treatment liquid to be heated.

12. (Rejected) The method according to claim 9, wherein effecting desorption of the reversibly dehydratable material includes heating air during its passage through the sorption column and thereafter passing the air through a heat storage device for cooling in order to intermediately store the heat used for desorption in the heat storage device, and further including thereafter passing air for heating purposes through the heat storage device and into the treatment chamber.

13. (Rejected) The method according to claim 9, wherein effecting desorption of the reversibly dehydratable material includes heating the air via a heater in a pipe to the sorption column.

14. (Rejected) The method according to claim 12, wherein at least one of the treatment liquid and the items are heated by the heated air and effecting desorption of the reversibly dehydratable material includes at least partly delivering the desorbed moisture from the sorption column into at least one of the treatment chamber or the heat storage device.

15. (Rejected) The method according to claim 9, wherein effecting desorption of the reversibly dehydratable material includes heating the air via the heat of condensation in the sorption column.

16. (Rejected) The method according to claim 9, wherein the step of guiding the air that has been heated as it passed through the sorption column into the treatment chamber includes cooling the air that has been heated at a location intermediate the sorption column and the treatment chamber.

17. (Rejected) The method according to claim 16, wherein cooling the air that has been heated at a location intermediate the sorption column and the treatment chamber includes contacting the air that has been heated with a liquid having a temperature less than the air such that at least some evaporation of the liquid occurs, whereupon a cooling of the air takes place as a result of evaporation cooling.

18. (Rejected) The method according to claim 9 and further comprising a step of drawing air from at least one of a source of air consisting of air from the treatment chamber and a source of air consisting of ambient air through the sorption column by means of an air accelerator means after the step of effecting desorption of the reversibly dehydratable material in the sorption column, this step including drawing such air through the sorption column from the respective source of air substantially without imparting heat to the air from after the air exits the respective source of air up to its entry into the sorption column, the air drawn through the sorption column being heated within the sorption column via heat of condensation as liquid is condensed from the air and absorbed by sorption material in the sorption column, and guiding the air that has been heated as it passed through the sorption column into the treatment chamber, whereupon the air guided into the treatment chamber heats at least one of a treatment liquid to be applied to the items retained in the home appliance and the items themselves.

19. (Rejected) A method for operating a dishwasher, the method comprising: subjecting crockery retained in the dishwasher to a drying step after the crockery has undergone a treatment step as a result of which moisture remains on the crockery, the step of drying including drawing at least one of air from a treatment chamber and ambient air through a sorption column and thereafter guiding the air that has passed through the sorption column into a treatment chamber, the sorption column containing reversibly dehydratable material that operates to withdraw moisture from air

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during the passage of the air through the sorption column; and effecting desorption of the reversibly dehydratable material in the sorption column via drawing at least one of air from the treatment chamber and ambient air through the sorption column by means of an air accelerator means, subjecting air passing through the sorption column to heating, and guiding the air that has been heated as it passed through the sorption column into the treatment chamber, wherein the air guided into the treatment chamber heats at least one of a treatment liquid to be applied to the crockery retained in the device and the crockery themselves.

#### **(4) Status of Amendments After Final**

The examiner has no comment on the appellant's statement of the status of amendments after final rejection contained in the brief.

#### **(5) Summary of Claimed Subject Matter**

The examiner has no comment on the summary of claimed subject matter contained in the brief.

#### **(6) Grounds of Rejection to be Reviewed on Appeal**

The examiner has no comment on the appellant's statement of the grounds of rejection to be reviewed on appeal. Every ground of rejection set forth in the Office action from which the appeal is taken (as modified by any advisory actions) is being maintained by the examiner except for the grounds of rejection (if any) listed under the subheading "WITHDRAWN REJECTIONS." New grounds of rejection (if any) are provided under the subheading "NEW GROUNDS OF REJECTION."

Claims 9-12 and 16-18 are rejected under 35 U.S.C. 102(b) as being anticipated by Dinh (US 5,343,632).

Claims 13-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dinh in view of Tuck et al. (US 3,034,221).

Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Dinh in view of Chamberlain (US 2,633,928).

#### **(7) Claims Appendix**

The examiner has no comment on the copy of the appealed claims contained in the Appendix to the appellant's brief.

#### **(8) Evidence Relied Upon**

5,343,632	Dinh	9-1994
3,034,221	Tuck et al.	5-1962
2,633,928	Chamberlain	4-1953

#### **(9) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

#### ***Claim Rejections - 35 USC § 102***

Claims 9-12 and 16-18 are rejected under 35 U.S.C. 102(b) as being anticipated by Dinh (US 5,343,632). The claims are reasonably and broadly construed, in light of the accompanying specification, to be disclosed by Dinh, as comprising:

subjecting items retained in the home appliance to a drying step after the items have undergone a treatment step as a result of which moisture remains on the items, the step of drying including drawing at least one of air from a treatment chamber and



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ambient air through a sorption column and thereafter guiding the air that has passed through the sorption column into a treatment chamber, the sorption column containing reversibly dehydratable material that operates to withdraw moisture from air during the passage of the air through the sorption column (column 5 lines 44-60 and column 7 lines 58-66); and

effecting desorption of the reversibly dehydratable material in the sorption column via drawing at least one of air from the treatment chamber and ambient air through a sorption column by means of an air accelerator means, subjecting air passing through the sorption column to heating, and guiding the air that has been heated as it passed through the sorption column into the treatment chamber, whereupon the air guided into the treatment chamber heats at least one of a treatment liquid to be applied to the items retained in the device and the items themselves (column 6 lines 4-59 and column 8 lines 6-57). Dinh also discloses the claimed steps of effecting desorption of the reversibly dehydratable material includes heating air during its passage through the sorption column by heat of condensation and a selected one of additional heating via a heater and no additional heating via a heater at column 5 line 3, wherein the passage of air is undertaken during a program step using treatment liquid to be heated (column 5 line 61), wherein effecting desorption of the reversibly dehydratable material includes heating air during its passage through the sorption column and thereafter passing the air through a heat storage device for cooling in order to intermediately store the heat used for desorption in the heat storage device, further including thereafter passing air for heating purposes through the

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heat storage device and into the treatment chamber (column 5 line 15), guiding the air that has been heated as it passed through the sorption column into the treatment chamber includes cooling the air that has been heated at a location intermediate the sorption column and the treatment chamber (column 5 lines 44-60), wherein cooling the air that has been heated at a location intermediate the sorption column and the treatment chamber includes contacting the air that has been heated with a liquid having a temperature less than the air such that at least some evaporation of the liquid occurs, whereupon a cooling of the air takes place as a result of evaporation cooling (column 4 lines 45-64), and a step of drawing air from at least one of a source of air consisting of air from the treatment chamber and a source of air consisting of ambient air through the sorption column by means of an air accelerator means after the step of effecting desorption of the reversibly dehydratable material in the sorption column, this step including drawing such air through the sorption column from the respective source of air substantially without imparting heat to the air from after the air exits the respective source of air up to its entry into the sorption column, the air drawn through the sorption column being heated within the sorption column via heat of condensation as liquid is condensed from the air and absorbed by sorption material in the sorption column, and guiding the air that has been heated as it passed through the sorption column into the treatment chamber, whereupon the air guided into the treatment chamber heats at least one of a treatment liquid to be applied to the items retained in the device and the items themselves at column 6 lines 4-59.

***Claim Rejections - 35 USC § 103***

Claims 13-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dinh in view of Tuck et al. (US 3,034,221). Dinh discloses the claimed invention, as rejected above, except for the claimed features including effecting desorption of the reversibly dehydratable material includes heating the air via a heater in a pipe to the sorption column, wherein at least one of the treatment liquid and the items are heated by the heated air and effecting desorption of the reversibly dehydratable material includes at least partly delivering the desorbed moisture from the sorption column into at least one of the treatment chamber or the heat storage device, and wherein effecting desorption of the reversibly dehydratable material includes heating the air via the heat of condensation in the sorption column. Tuck, another method for operating a device, discloses effecting desorption of the reversibly dehydratable material includes heating the air via a heater in a pipe to the sorption column at column 2 lines 17-27, wherein at least one of the treatment liquid and the items are heated by the heated air and effecting desorption of the reversibly dehydratable material includes at least partly delivering the desorbed moisture from the sorption column into at least one of the treatment chamber or the heat storage device, and wherein effecting desorption of the reversibly dehydratable material includes heating the air via the heat of condensation in the sorption column at column 2 line 54 through column 3 line 59 respectively. It would have been obvious to one skilled in the art to combine the teachings of Dinh with the features disclosed in Tuck for the purpose of efficiently using heated air to provide an

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effective use of energy in using waste heat to minimize the cost of reverse dehydration in sorption columns.

Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Dinh in view of Chamberlain (US 2,633,928). Dinh discloses the claimed invention, as rejected above, except for the claimed crockery features.. Chamberlain, another method for operating a device, discloses that feature at figure 20. It would have been obvious to one skilled in the art to combine the teachings of Dinh with the crockery features disclosed in Chamberlain for the purpose of efficiently using heated air to provide an effective use of energy in using waste heat to minimize the cost of reverse dehydration in sorption columns.

#### **(10) Response to Argument**

##### ***Dinh anticipation***

Appellants argue that the claimed sorption column with a reversible dehydratable material defines the claimed invention over the prior art. However, the claims are reasonably and broadly construed, in light of the accompanying specification, such that the argued feature is implicitly disclosed in Dinh as rejected above. Specifically, the disclosed regenerative heat exchanger **140** (beginning at column 6 line 51) is structurally and functionally the same as the disclosed sorption column because both use a reversibly dehydratable material. The claimed "sorption" is not claimed or specified in sufficient detail to distinguish that feature over the prior art. The disclosed "regenerative heat exchanger" meets the claimed "sorption column" since both are structurally and functionally the same.

Also, the Dinh reference discloses a feature of "absorbing moisture from the materials in the drying chamber of the dryer" (please see column 6 lines 23-24 of that reference) where as the application specifies "the sorption column contains reversibly dehydratable material" (please see specification page 3 lines 8-9. Both the prior art reference and the specifics from the application implicitly discuss removing moisture by "absorbing" or "sorption," which for patentability purposes are identical and interchangeable terms of the art. Since the disclosed "regenerative heat exchanger" is the same as the specified "reversibly dehydratable material," then under current Office practice, the claimed features are met by the Dinh reference.

Although appellant argues that the invention is significantly different from the teachings of Dinh, the claim language supports the rejection. In response to cooling feature asserted in Dinh, the cooling is matter of perspective because the absorbed or dried material is heated, as argued. Regarding each of the depending claims, since the independent claim rejection should be maintained, so should the depending claims. Specifically laws of thermodynamics govern heat transfer such that if a product is cooled, then another product is heated which would apply to claims 10-12 and 16-18.

### ***Tuck obviousness***

Regarding appellants argument that Tuck vents heated air to the atmosphere such that it is not used to transfer heat to the treatment chamber, the claim feature is met by Tuck. The feature claimed is as follows:

"effecting desorption of the reversibly dehydratable material includes heating the air via a heater in a pipe to the sorption column, wherein at least one of the treatment liquid and the items are heated by the heated air and effecting desorption of the reversibly dehydratable material includes at least partly delivering the desorbed

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moisture from the sorption column into at least one of the treatment chamber or the heat storage device, and wherein effecting desorption of the reversibly dehydratable material includes heating the air via the heat of condensation in the sorption column.”

Since that feature is claimed in the alternative, it is irrelevant where the heat from Tuck is used, because as claimed, it can be used for either the treatment chamber or the heat storage device. In Tuck heated dry air is released "to the outside " (please see Tuck column 2 line 22) of bypassed to “by way of leakage of the tumbling drum” (column 2 lines 24+). Therefore Tuck is proper to obviate the claimed invention, as rejected above.

In response to appellant’s argument that there is no teaching, suggestion, or motivation to combine the references, the examiner recognizes that obviousness may be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988), *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992), and *KSR International Co. v. Teleflex, Inc.*, 550 U.S. 398, 82 USPQ2d 1385 (2007). In this case, Tuck was not cited to teach every feature of the claimed invention, but rather that it would have been obvious to one skilled in the art to modify the teachings of Dinh, as rejected above.

In response to appellant's argument that Tuck is nonanalogous art, it has been held that a prior art reference must either be in the field of appellant’s endeavor or, if not, then be reasonably pertinent to the particular problem with which the appellant was

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concerned, in order to be relied upon as a basis for rejection of the claimed invention.

See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In this case, Tuck was not cited to teach every feature of the claimed invention, but rather that it would have been obvious to one skilled in the art to modify the teachings of Dinh, as rejected above.

In response to appellant's argument that the teachings of Tuck, a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim.

Appellant's arguments fail to comply with 37 CFR 1.111(b) because they amount to a general allegation that the claims define a patentable invention without specifically pointing out how the language of the claims patentably distinguishes them from the references.

### ***Chamberlain obviousness***

Chamberlin was not cited to show every feature of the claimed invention, but rather that it would have been obvious to one skilled in the art to combine the teachings of Dinh in order to obviate the claimed invention, as rejected above.

Appellant's arguments do not comply with 37 CFR 1.111(c) because they do not clearly point out the patentable novelty which he or she thinks the claims present in view of the state of the art disclosed by the references cited or the objections made. Further, they do not show how the amendments avoid such references or objections.

In response to appellant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

In response to appellant's argument that there is no teaching, suggestion, or motivation to combine the references, the examiner recognizes that obviousness may be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988), *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992), and *KSR International Co. v. Teleflex, Inc.*, 550 U.S. 398, 82 USPQ2d 1385 (2007). In this case, Chamberlain was not cited to teach every feature of the claimed invention, but rather that it would have been obvious to one skilled in the art to modify the teachings of Dinh, as rejected above.

In response to appellant's argument that Chamberlain is nonanalogous art, it has been held that a prior art reference must either be in the field of appellant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the appellant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In this case, Chamberlain was not cited to teach every feature of the claimed invention, but



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rather that it would have been obvious to one skilled in the art to modify the teachings of Dinh, as rejected above.

In response to appellant's argument that the teachings of Chamberlain, a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim.

**(11) Related Proceeding(s) Appendix**

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/Stephen M. Gravini/

Primary Examiner, Art Unit 3743

Conferees:

/Kenneth B Rinehart/

Supervisory Patent Examiner, Art Unit 3743

/Michael Phillips/

RQAS